

REMARKS

In this response to the above identified Office Action, the Applicants respectfully request reconsideration in view of the following aforementioned amendments and remarks. Claims 1, 8, 11, 14, 22, 25, 32, 34, 38, and 46 are amended. Claim 49 is new and supported, for example, by paragraphs [0040] and [0042] of the Specification. Accordingly, claims 1-49 are pending in the application.

I. Claims Rejected Under 35 U.S.C. § 112

Claims 7, 10 and 37 are rejected under MPEP § 2164.08(a) Single Means Claim. The Examiner alleged on page 2 of the Office Action that the claims comprise single means claims, which “covered every conceivable means for achieving the stated purpose . . . [and] the specification disclosed at most only those means known to the inventor.” The Applicants respectfully submit that claims 7 and 10 are directed to method claims and claim 37 is directed to a machine readable medium claim.

In regard to claim 7, the claim recites the following limitations:

- upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port; and
- upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero.

A single means claim is defined as a claim drafted in “means-plus-function” format yet recites only a single element instead of a combination. See *In re Hyatt*, 218 USPQ 195 at 196 (Fed. Cir. 1983). As an initial matter, the claim language does not recite limitations constructed using the requisite means-plus-function format. For example, the term “means” is entirely absent from the claim language. In addition, claim 7 recites a combination of multiple elements and not a single element. Therefore, for at least the foregoing reasons, the Applicants respectfully submit that MPEP § 2164.08(a) is inapplicable as a basis for rejection of claim 7. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 7.

In regard to claim 10, the claim recites the following limitations:

- upon determining that the number of bytes transferred on a first port during a current

cycle is not greater than a predetermined number of bytes less an overshoot value for the first port, reducing the overshoot value for the first port by a number of bytes transferred by the first port during the current cycle less than the predetermined number of bytes less the overshoot value for the first port; and upon determining that the reducing would cause the overshoot value for the first port to become negative, adding the predetermined number of bytes to the overshoot value for the first port.

Again, the Examiner's conjecture that the claim limitations comprise a single means claim is untenable because the requisite means-plus-function language is absent from the claim. In addition, claim 10 recites a combination of multiple elements rather than a single element. Therefore, for at least the foregoing reasons, the Applicants respectfully submit that the claim language recited in claim 10 does not comprise a single means claim. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 10.

In regard to claim 37, this claim includes analogous limitations to those recited in claim 10. Therefore, for at least the reasons discussed in connection with claim 10, the Applicants respectfully submit that the claim language recited in claim 37 does not comprise a single means claim. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 37.

II. Claims Rejected Under 35 U.S.C. § 103

A. Claims 1, 4, 8, 2, 5, 9, 15, 18, 20, 32, 39, 42, 44, 14, 19, 38, 43, 22 and 46 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,810,031 to Hegde et al. (hereinafter "Hegde") in view of U.S. Patent No. 5,436,898 to Bowen et al. (hereinafter "Bowen"). To establish a prima facie case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there must be a reasonable expectation of success; and (3) the references when combined must teach or suggest all of the claim limitations. See MPEP, § 2142.

Claim 1, as amended, recites the elements of "updating the overshoot value for the first port based on the number of bytes transferred on the first port *in excess of the predetermined number of bytes less the overshoot value*" (emphasis added). The amendment is supported, for example, by paragraphs [0005] and [0042] of the Specification. The Applicants believe that Hegde fails to teach these elements of claim 1. Hegde teaches using a credit to indicate an amount of additional bytes that are allowed to be transferred during a given cycle. See Hegde,

Abstract. The section of Hegde cited by the Examiner generally states that the credit is updated “based on” the difference between the actual number of transmitted bytes and the allowed number of bytes. See Hegde, column 15, lines 13-15. However, the phrase “based on” as stated in Hegde is ambiguous, as it does not specify any specific function or method of calculation. Hegde clarifies the rule for updating the credit by teaching that the credit is actually updated according to the number of bytes transferred *below* an allowed amount. See Hegde, column 7, lines 48-55. In other words, the credit is updated by subtracting an actual number of transferred bytes from the allowed number of bytes, rather than being based on the amount of transferred bytes “in excess of the predetermined number of bytes” as recited in the claim. For example, assuming that the allowed number of bytes is 32 bytes, the current credit value is 2 bytes, and the actual number of transferred bytes is 30 bytes, then applying Hegde’s rule results in the credit being updated with an increase in value of 2 bytes (i.e., $32 - 30 = 2$). Therefore, the credit is updated to have a *value of 4 bytes* (i.e., $2 + 2 = 4$). In contrast, the same numbers applied to the claim language of claim 1 (e.g., predetermined number of bytes is 32 bytes, overshoot value is 2 bytes, number of bytes transferred is 30) would result in an overshoot value *being equal to 0 bytes* (i.e., $30 - (32 - 2) = 0$). Therefore, it can be clearly demonstrated that the application of Hegde’s rule obtains a different result than the limitations recited in claim 1 (i.e., $4 \neq 0$). As a result, Hegde fails to teach the limitations of “updating the overshoot value . . . based on the number of bytes transferred . . . *in excess of the predetermined number of byte less the overshoot value*,” (emphasis added) as recited in the claim.

In addition, it can be understood that Hegde’s rule necessarily includes an upper bound that requires the amount of transferred bytes to be *not greater* than the allowable amount plus the credit value. See Hegde, column 8, lines 1-3. In contrast, claim 1 allows for the number of bytes transferred to be “*in excess of the predetermined number of byte less the overshoot value*,” (emphasis added) as recited in the claim. Therefore, for at least these reasons, Hegde does not teach or suggest each of the elements of claim 1. In addition, Bowen fails to cure the deficiencies of Hegde. The Examiner has not relied upon and the Applicants have been unable to discern any part of Bowen that teaches or suggests the missing elements. Thus, for at least the foregoing reasons, Hegde in view of Bowen fails to teach or suggest each element of claim 1. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1.

In regard to claims 2, 4, and 5, these claims depend from base claim 1 and incorporate the limitations thereof. Thus, for at least the reasons mentioned in connection with claim 1, Hegde in view of Bowen fails to teach or suggest the each element of claims 2, 4, and 5. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2, 4, and 5.

In regard to claims 8, 14, 32, and 38, these claims, as amended, recite analogous limitations to those recited in claim 1. In regard to claim 9, this claim depends from base claim 8 and incorporates the limitations thereof. In regard to claims 15, 18, 19, and 20, these claims depend from base claim 14 and incorporate the limitations thereof. In regard to claims 39, 42, 43, and 44, these claims depend from base claim 38 and incorporate the limitations thereof. Thus, for at least the reasons mentioned in connection with claim 1, Hegde in view of Bowen fails to teach or suggest each element of claims 8, 9, 14, 15, 18, 19, 20, 32, 38, 39, 42, 43, and 44. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 8, 9, 14, 15, 18, 19, 20, 32, 38, 39, 42, 43, and 44.

In regard to claims 22 and 46, the claims, as amended, recite the limitations of “a pair of reserved ports connected to the first interface, wherein the pair of reserved ports are to transfer data during the current cycle before each pair of ports selected by the bandwidth balancing arbiter.” The amendment is supported, for example, by paragraphs [0065] and [0068] of the Specification. Hegde fails to disclose these elements. Hegde uses the Bandwidth Distribution Protocol (BWDP) to select *every input port* to divide among the output ports of the line cards or IPE cards. See Hegde, column 7, lines 32-37. However, the BWDP does not ensure that a pair of reserved ports (i.e., input ports that are excepted from being managed by the BWDP) transfers data before each input port managed by the BWDP. As a result, Hegde fails to teach the limitations of “a pair of reserved ports connected to the first interface, wherein the pair of reserved ports are to transfer data during the current cycle before each pair of ports selected by the bandwidth balancing arbiter,” as recited in the claims. Therefore, for at least these reasons, Hegde fails to teach or suggest each element of claims 22 and 46. In addition, Bowen fails to cure the deficiencies of Hegde. The Examiner has not relied upon and the Applicants have been unable to discern any part of Bowen that teaches or suggests the missing elements. Thus, for at least the foregoing reasons, Hegde in view of Bowen fails to teach or suggest each element of claims 22 and 46. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 22 and 46.

B. Claims 3, 6, 16, 40, 45, 7, 17, 21, 41, 25, 28, 26, 29, 27, 30, 31 and 32 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hegde and Bowen as applied to claims 1, 4, 8, 2, 5, 9, 15, 18, 20, 32, 39, 42, 44, 14, 19, 38, 43, 22 and 46 and further in view of U.S. Patent No. 6,920,110 to Roberts et al. (hereinafter “Roberts”). To establish a prima facie case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there must be a reasonable expectation of success; and (3) the references when combined must teach or suggest all of the claim limitations. See MPEP, § 2142.

In regard to claims 3 and 6, these claims depend from base claim 1 and incorporate the limitations thereof. In regard to claim 16, 17, and 21, these claims depend from base claim 14 and incorporates the limitations thereof. In regard to claims 25 and 32, these claims recite analogous limitation to those recited in claim 1. In regard to claims 26-30, these claims depend from base claim 25 and incorporate the limitations thereof. In regard to claims 40, 41, and 45, these claims depend from claim 38 and incorporate the limitations thereof. Thus, for at least the reasons mentioned in connection with claims 1, 14, and 38, Hegde in view of Bowen fails to teach or suggest each element of claims 3, 6, 16, 17, 21, 25-30, 32, 40, 41, and 45. In addition, the Examiner did not cite and the Applicants are unable to discern the portion of Roberts that discloses the missing limitations. Thus, Hegde in view of Bowen in further view of Roberts fails to teach or suggest each element of claims 3, 6, 16, 17, 21, 25-30, 32, 40, 41, and 45. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 3, 6, 16, 17, 21, 25-30, 32, 40, 41, and 45.

In regard to claims 7 and 31, these claims recite the limitations of “upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and *a packet was transferred by the first port during the current cycle*, setting the overshoot value to zero” (emphasis added). The Applicants believe that these elements of the claims are not taught or suggested by Hegde in view of Bowen in further view of Roberts. On pages 9 and 10 of the Office Action, the Examiner cited column 10, lines 23-32, of Roberts (“the threshold is initially set to zero”) as allegedly teaching “setting the overshoot value to zero,” as recited in the claims. However, setting the threshold to zero simply *initializes the threshold value* until the new maximum is detected based on the actual usage. See Roberts, column 10, lines 30-32. In other

words, it can be understood that the zero value serves as a placeholder value *before any sort of determination occurs* in Roberts. As a result, “setting the overshoot value to zero” based on a determination that “a packet was transferred by the first port during the current cycle,” as required in the claims is not taught because the threshold value is set to zero before any sampling of the actual usage takes place in Roberts. See Roberts, column 10, lines 27-32.

Moreover, this part of the reference discusses steps to be taken, should the actual usage be *greater* than the current maximum (see Fig. 7, flow from step 124 to step 126). The claim elements at issue, on the other hand, include “setting the overshoot value to zero” “upon determining that a number of bytes transferred on a first port during a current cycle is *not greater* than the predetermined number of bytes less the overshoot value” (emphasis added). The teachings of the reference are thus inapplicable in this discussion. Further, although the Examiner has relied upon Bowen to assert the rejection, the Examiner has not cited the portion of Bowen that allegedly discloses the cited limitation. Thus, for at least these reasons, Hegde in view of Bowen in further view of Roberts does not teach or suggest each of the elements of the claims. Accordingly, for at least the foregoing reasons, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7 and 31 are requested.

In addition, the Applicants respectfully submit that Hegde is not properly combined with Roberts. The Examiner asserted on page 10 of the Office Action that it would have been obvious to modify Hegde with Roberts “in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitor level of actual utilization.” However, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See MPEP, § 2143.01(V). Hegde’s principle of operation is to update a credit value based on the number of transferred bytes *below* the allowed number plus the credit value. See Hegde, column 7, lines 48-55. In contrast, Roberts determines whether the actual usage is *greater than* the current maximum value to obtain a new maximum value. See Roberts, column 10, lines 23-26. Further, the credit value of Hegde would never be updated to equal zero as taught in Roberts (e.g., see column 10, lines 23- 32, where actual usage and threshold level are initialized to zero) because Hegde is *incrementing* the credit value. See Hegde, column 7, lines 53-55. As a result, a combination of Hegde with Roberts would render Hegde’s principle of operation improper for its intended purpose. Therefore, for at least the foregoing reasons, no suggestion or motivation to make the proposed modification exists. Thus,

a *prima facie* case of obviousness has not been established. Accordingly, for at least the foregoing reasons, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7 and 31 are requested.

C. Claims 23, 47, 24 and 48 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hegde and Roberts as applied to claims 1, 4, 8, 2, 5, 9, 15, 18, 20, 32, 39, 42, 44, 14, 19, 38, 43, 22, 46, 3, 6, 16, 40, 45, 7, 17, 21, 41, 25, 28, 26, 29, 27, 30, 31 and 32 and further in view of U.S. Patent No. 5,751,802 to Carr et al. (“Carr”). To establish a *prima facie* case of obviousness Examiner must show that the cited references, combined, teach or suggest each of the elements of the claims.

Claims 23, 24, 47, and 48 depend from independent claims 22 and 46, respectively, and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claims 22 and 46, and because Examiner has not relied upon and the Applicants have been unable to discern any part of Roberts or Carr that cures the deficiencies of Hegde, Hegde in view of Roberts and further in view of Carr does not teach or suggest each of the elements of these dependent claims. Accordingly, reconsideration and withdrawal of the rejection of these claims are requested.

D. Claims 11 and 34 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0039364 to Kamiya et al. (“Kamiya”) in view of Hegde. To establish a *prima facie* case of obviousness Examiner must show that the cited references, combined, teach or suggest each of the elements of the claims.

In regard to claim 11, this claim, as amended, recites the limitations of “the plurality of pairs of ports included in a first interface and a second interface.” The amendment is supported, for example, by paragraph [0064] of the Specification. The Examiner alleged on page 20 of the Office Action that Fig. 1 of Kamiya showing “elements 204_1, 204_2 input ports correlates [*sic*] to a port connected to a first interface and a port connected to a second interface.” Fig. 1 of Kamiya, however, shows a *single port for each input interface* rather than “the *plurality of pairs of ports* included in a first interface and a second interface,” (emphasis added) as recited in the claims. See Kamiya, paragraph [0036]. Therefore, Kamiya fails to teach or suggest each element of claim 11. In addition, the Examiner has not relied upon and the Applicants have been unable to discern any part of Hegde that cures the deficiencies of Kamiya. Therefore, for at least

the foregoing reasons, Kamiya in view of Hegde does not teach or suggest each of the elements of claim 11.

Independent claim 34, as amended, recites analogous elements to those of independent claim 11. Thus, at least for the reasons mentioned above in regard to independent claim 11, and because Examiner has not relied upon and the Applicants have been unable to discern any part of Hegde that cures the deficiencies of Kamiya, Kamiya in view of Hegde does not teach or suggest each of the elements of claim 34. Accordingly, reconsideration and withdrawal of the rejection of claims 11 and 34 are requested.

E. Claims 12, 35, 13 and 36 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kamiya and Hegde as applied to claims 11 and 34 and further in view of Carr. To establish a *prima facie* case of obviousness Examiner must show that the cited references, combined, teach or suggest each of the elements of the claims.

Claims 12 and 13 depend from independent claim 11, and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claims 11, and because Examiner has not relied upon and the Applicants have been unable to discern any part of Carr that cures the deficiencies of Kamiya and Hegde, Kamiya and Hegde and further in view of Carr does not teach or suggest each of the elements of these dependent claims. Accordingly, reconsideration and withdrawal of the rejection of claims 12 and 13 are requested.

Claims 35 and 36 depend from independent claim 34, and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to independent claim 34, and because Examiner has not relied upon and the Applicants have been unable to discern any part of Carr that cures the deficiencies of Kamiya and Hegde, Kamiya in view of Hegde and further in view of Carr does not teach or suggest each of the elements of claims 35 and 36. Accordingly, reconsideration and withdrawal of the rejection of claims 35 and 36 are requested.

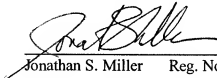
CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-49, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If Examiner believes that a telephone conference would be useful in moving the application forward to allowance, Examiner is encouraged to contact the undersigned at (310) 207 3800.

Respectfully submitted,

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Melissa Stead

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